

What Is Claimed Is:

1. A buffer memory management method in a packet transmission/reception device, for storing received packets in a buffer memory and controlling writing and reading of packets to and from said buffer memory, the method  
5 comprising the steps of:

setting in units of the service class included in a header portion of a received packet, a control method for the received packets; and,

10 modifying allocated areas for each service class in said buffer memory storing received packets according to the number of said service classes setting.

2. The buffer memory management method according to claim 1, wherein said control method for the received  
15 packets includes delay for the packet, packet loss, packet order inversion, or error insertion, and said service classes are classified by an IP address or TCP/UDP port number comprised by the header portion of said packet.

20 3. A packet buffer management system, comprising:  
a buffer memory to store received packets;  
a control portion to control writing and reading of packets to and from said buffer memory;

25 a service class characteristic table in which are set control methods for packets corresponding to service classes included in header portions of the received packets; and,

a conversion portion in which are stored allocated areas of said buffer memory corresponding to service classes, wherein said conversion portion modifies the allocated areas of said buffer memory according to the number of service  
5 class settings in said service class characteristic table.

4. The packet buffer management system according to Claim 3, wherein, in said conversion table, buffer memory allocation areas are in service class units.

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5. The packet buffer management system according to Claim 3, further comprising a management memory to store transfer pointers indicating the storage position of packets stored in said packet buffer and time stamp values  
15 indicating the time at which packets are stored, wherein

said control portion performs control of received packets based on packet existence information and said time stamp values within said packet buffer, and based on the control method set in said service class characteristic  
20 table.

6. The packet buffer management system according to Claim 5, wherein, as a control method of said control portion, received packet order inversion and router path  
25 modification are performed by moving the transfer pointer based on said time stamp value.

7. The packet buffer management system according to Claim 3, wherein operations to store packets in said buffer memory, packet registration operations, transfer pointer read operations, and packet transfer analysis operations are  
5 each performed in parallel.

8. The packet buffer management system according to Claim 5, further comprising means for storing in said management memory the time of packet storage in said packet  
10 buffer as the time stamp, and for judging whether the packet can be transferred by comparing said time stamp with the reference time within the device at the time of packet transfer analysis, wherein

when a preset delay time has not elapsed, said time  
15 stamp is stored in a time stamp buffer provided in service class units, and in subsequent transfer analysis the time stamp within said time stamp buffer is compared with the reference time.